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ABSTRACT

A total of 96 Canadian elementary school children (48 "natives" and 48 nonnatives) participated in a study to determine if there were differences in the reading, writing, speaking, and listening skills of native and nonnative children in the same grades in the same school. The subjects were tested for oral and silent reading skills, constrained oral expression, unconstrained oral expression, and written expression. The results showed that there were no significant differences between the native and nonnative groups in terms of oral and silent reading skills; that the nonnative group performed better than the native group in responding orally to the constrained response questions; that their performance dropped drastically when responding to the unconstrained response questions, whereas the native group's performance on this task receded more slowly; and that there were no significant differences between the two groups in terms of written expression. (FL)

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A COMPARISON OF READING AND LANGUAGE ACHIEVEMENT BETWEEN NON-NATIVE AND NATIVE PUPILS IN AN ELEMENTARY SCHOOL IN REGINA

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A Research Project

by

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April, 1980

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TABLE OF CONTENTS

	Page
INTRODUCTION	1
THE STUDY	2
PURPOSE OF THE STUDY	3
Questions Asked	4
Participants of the Study	5
FORMAL AND INFORMAL MEASUREMENTS	7
ADMINISTRATION	9
REPORTING THE FINDINGS	10
RESULTS AND DISCUSSIONS	10
Part I: Printed Language in CTBS Subtests	10
Schonell Graded Reading Test	14
Gray Oral Reading Test	16
Part II: Spoken Language Constrained Responses	17
Unconstrained Responses	18
Part III: Written Language Sentence Writing	24
WHAT HAS BEEN LEARNED	26
MORE FACTS NEEDED	27
References	29

LIST OF TABLES

Table		Page
1	Mean Ages and Mean Grade-Equivalent (G-E) Scores for Selecting the Study Population	6
2	Correlation Coefficients for CTBS Subtests for the Total Population and for the Elementary Non-Native and Native School Pupils	10
3	Correlation Coefficients for CTBS Subtests for Individual Grades I to VIII for Non-Native and Native School Pupils	12
4	A Comparison of Mean Scores of the CTBS Subtests Between Non-Native and Native School Pupils in Grades I to VIII	13
5	A Comparison of Grade-by-Grade Mean Scores of the Reading Subtests Between Non-Native and Native School Pupils in Grades I to VIII	14
6	A Comparison of Graded Word Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII	15
7	A Comparison of Oral Reading Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII	16
8	Significance of Difference Between Mean Scores for Non-Native and Native School Pupils in Grades I to VIII for Parts of Speech in Constrained Responses	17

Table		Page
9	Significance of Difference Between Mean Scores for Non-Native and Native School Pupils in Grades I to VIII for Parts of Speech in Unconstrained Responses	19
10	Significance of Difference of Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII for Word Usage in Sentence Writing	25

LIST OF FIGURES

Figure		Page
1	Comparison of Constrained and Unconstrained Common Noun Responses of 48 Native and 48 Non-Native School Pupils in Grades One to Eight	22
2	Comparison of Constrained and Unconstrained Main Verb Responses of 48 Native and 48 Non-Native School Pupils in Grades One to Eight	23

INTRODUCTION

The topic of this research report may well be befitting our times in which native people individually, within and through their organizations and institutions, seek to understand people of non-native ancestry, their ways of living, believing, acting, and thinking. Conversely, non-native people should seek to better understand people of native ancestry, their ways of living, believing, acting and thinking. This calls for mutual understanding that is guided by and based on fact-finding rather than on hear-say attitudes.

One of the areas least guided by facts is public school education. Much of what one thinks and believes surrounds public school education of native pupils in non-native schools. Non-native public and private opinions are heard and publicized that too often transmit impressions that native school pupils cannot read, write, and have little or no command of the English language. As a result of these apparent deficiencies, native pupils have to be placed into special learning rooms or tutorial settings, all of which translates into draining the public purse.

But, how are native school pupils performing academically in processing the printed, spoken and written English language when compared with their non-native peers? Are elementary native pupils who are sitting in the same classrooms with the non-native pupils performing worse, equal or even better in these same fundamental educational skills?

THE STUDY

An increase in native adult population in the City of Regina and its immediate surroundings tends to translate into an increase of native children in Regina schools. Within the last decade public and separate schools in Regina experienced an unprecedented increase in native children. They were coming to and attending these schools to receive rightfully free public education together with the non-native pupils.

This influx, wanted or not wanted, welcomed or not welcomed, was nevertheless real in the sense that native school pupils became part of the non-native public schools to be incorporated into non-native educational instruction.

Were the schools prepared for this influx? Were native school pupils willing to learn? Were non-native teachers and non-native pupils willing to co-operate and compensate in their efforts to understand a new instructional coming? Were native school pupils less verbal than the non-native school pupils? Were native school pupils as English speakers linguistically handicapped or more handicapped than the non-native English speakers? Were native school pupils able to follow instruction in the English school language? How did native school pupils use the English language as a tool to read, write, and speak?

These and other related questions gave the study direction to investigate and determination to find evidence. In its format and scope this study was an exploratory one in the sense that it was undertaken: to substantiate if there were any shortcomings in fundamental educational skills between non-native and native pupils, to replicate this study with

same or modified measuring instruments in other Regina schools with similar influx of native pupils as well as in schools attended by more natives.

Content and findings of this exploratory study reported here in its form and scope were addressed to classroom teachers, school principals, school board officials, and to officers and members of native organizations concerned with and interested in native school education.

PURPOSE OF THE STUDY

The purpose of this study was to find out how native and non-native school pupils performed in fundamental educational skills, that is, in reading, speaking, writing and doing arithmetic when sitting together in the same classrooms and being taught by the same teachers in the same school.

Language in its functions of listening, speaking, reading, and writing leads to a body of facts that makes it possible to identify if and how native school pupils perform academically when compared with their non-native peers in the same grades. Reading, speaking, and writing in the English language are acquired through learning and teaching. Through reading, English utterances are received, through speaking and writing, they are expressed. To find out how well utterances in the English language were received through silent and oral reading, the study examined the results of the various subtests of the Canadian Tests of Basic Skills, the Schonell Graded Word Test, and the Gray Oral Reading Test. To find out how well utterances in the English language were expressed through speaking and writing, the study examined the results of controlled oral responses, less controlled oral responses, and of writing sentences.

To find out how effectively the non-native and the native school pupils in Grades I to VIII received and expressed utterances in the English language, performance results were analyzed for the total population, between the groups of non-native and native pupils as well as between each grade.

Questions Asked

Reading is an integral part that pervades most academic interactions between learners and subject matter areas. Without being able to read in the English language, school pupils will find it difficult to learn through printed matters as one of the prime movers in school instruction. Reading has a reciprocal relationship to all learning that must be obtained from books and other printed materials. To ascertain how non-native and native elementary school pupils processed the English language through silent and oral reading, through speaking and writing, the following questions were asked:

1. What will be the correlations between reading and vocabulary, reading and language, and reading and mathematics for the total population, for the groups of non-native and native school pupils and for each grade?

2. What will be the differences, if any, between the non-native and native school pupils in Grades I to VIII in their reading, vocabulary, language and mathematics performances?

3. What differences, if any, will be between the non-native and the native pupils when reading orally scientific graded word units to ascertain their reading ages for word recognition?

4. What will be the differences in mispronouncing words in context and in oral reading comprehension?

5. What will be the differences between non-native and native school pupils in using articles, pronouns, nouns, verbs, adjectives, adverbs, prepositions and conjunctions when answering questions in Constrained Responses?

6. What will be the differences between the non-native and the native pupils in using the same lexical and functional words when answering to Unconstrained Responses?

7. What will be the differences between the non-native and the native elementary school pupils in the number of words used in composing and writing sentences and in misspelling words in the same sentences?

Participants of the Study

The participants or population of this study were non-native and native pupils in Grades I to VIII who attended one school in Regina which in the last decade had received a large influx of native school pupils. This school was one of the Public Elementary Schools in Regina under the jurisdiction of the Board of Education for the Regina Public School District No. 4 of Saskatchewan. From the Research Officer of this Board permission was given to conduct the study in this school.

It was thought that the non-native and the native pupils in this study should be students in Grades I to VIII who were taught together in their respective classrooms by the same teachers in the same school. It was thought to be important for this exploratory study to have a population who was distributed throughout the eight grades within sixteen classrooms and was taught by at least sixteen teachers. It was hoped that this

wide distribution of the study population over eight grades with the variability in teaching personnel would dissipate possible cultural and/or educational favouring of either non-native or native school pupils.

Because of the exploratory nature of this study a criteria-selection was preferred over random selection. Hence, an attempt was made to select the participants as closely as possible according to chronological age, CTBS reading and CTBS composite grade-equivalent scores. In addition, it was thought that non-native and native pupils should be equally distributed in two groups as well as throughout the eight grades.

This attempted selection resulted in a total population of 96 school pupils who were equally divided into two groups of 48 non-native and 48 native pupils who were also equally distributed in Grades I to VIII. Table 1 shows mean ranges of chronological ages and CTBS grade-equivalent (G-E) reading and composite scores.

Table 1

Mean Ages and Mean Grade-Equivalent (G-E) Scores for Selecting the Study Population.

	Non-Native (N=48)	Range	Native (N=48)	Range
Chronological age	10.0-11.1	1.1	10.5-12.4	1.9
Reading G-E	3.7- 7.0	3.3	3.4- 5.8	2.4
Composite G-E	3.9- 6.8	2.9	3.7- 5.8	2.1

The Chronological Age range was 1.1 years for the non-native and 1.9 years for the native pupils. The Reading G-E range was 3.3 grades for the non-native and 2.4 grades for the native pupils with an overall

composite G-E range of 2.9 and 2.1 grades for the non-native and the native school pupils respectively. The somewhat higher mean chronological age range indicated that the native pupils were somewhat older yet according to the mean reading and composite ranges somewhat lower than the non-native school pupils in this sample.

FORMAL AND INFORMAL MEASUREMENTS

The study used as formal measurements the Canadian Tests of Basic Skills or the CTBS, the Schonell Graded Word Reading Test, and the Gray Oral Reading Test.

The CTBS Primary Battery for Grades I and II and the CTBS Multi-Level Edition for Grades III to VIII were administered to all study participants. CTBS subtests[2] are timed paper-pencil tests which the non-native and the native school pupils read silently and marked answers with a pencil in test booklets or separate answer sheets.

In contrast, the Graded Word Reading Test and the Gray Oral Reading Test were not paper-pencil tests. Instead, the pupils read orally only and answered questions, while the examiner was marking the oral reading performances.

The Schonell Graded Word Reading Test consisted of one hundred words that represented "scientifically selected sample of words, of increasing difficulty, that will give an accurate estimate of a pupil's power of word recognition, which is the basis of his ability to read and understand printed material"[3]. From the total number of words that the pupil was able to read his/her reading age was calculated.

The Gray Oral Reading Test contained graded Sets of Reading Passages which were read orally by the pupils. While reading orally, the examiner listened and marked any error(s) the pupils pronounced. After the oral reading, the examiner asked four questions which were "designed to measure the extent of understanding at the simplest level"[1]. Difficulty of each passage was increased by "difficulty of vocabulary, range and density of vocabulary, syllabic length of words, length and complexity of the structure of sentences and maturity of concepts"[1].

This study used as informal measurements Constrained Responses, Unconstrained Responses and Sentence Writing.

Constrained Responses consisted of a set of five questions whose wording was held constant throughout the questioning. Each of the 96 pupils was asked the same questions whose elicited responses were tape-recorded to be later transcribed and analyzed.

The five questions were: (1) What is your name? (2) How old are you? (3) What kinds of things do you like to do during summer vacations? (4) What subjects do you like best in school - followed by why?, and (5) What subjects do you like least in school - followed by why?

While Constrained Responses controlled the use of oral language through questions the examiner asked, Unconstrained Responses controlled the use of language less, thus giving each pupil the opportunity to use oral language in a relatively free manner. After a pupil had selected one of three picture cards[(4)]--apple, rabbit (running) and bike--the examiner invited each pupil to talk freely about the chosen card by saying: Tell me what you know about the picture. Again, Unconstrained Responses were tape-recorded to be later transcribed and analyzed.

The last of the informal measurements was to write in sentence form what a pupil recalled from the passage read earlier in the Gray Oral Reading Test. The task was a complex one because each pupil had to recall to form sentences, write them down and spell each word correctly.

ADMINISTRATION

Formal and informal measurements intended for this study were administered in the following order: the CTBS, Constrained and Unconstrained Responses, the Graded Word Reading Test, the Gray Oral Reading Test, and Sentence Writing.

The CTBS Primary Battery and the CTBS Multi-Level Edition were administered by the classroom teachers to all pupils in Grades I to VIII prior to the beginning of this study. The results were recorded by the teachers in grade-equivalent scores which were used for selecting non-native and native school pupils as well as for statistical calculations and analyses.

All other measurement instruments were administered in a one-to-one or examiner-pupil relationship. Oral responses were tape-recorded and later transcribed, typed and analyzed.

In Writing Sentences, pupils in Grades I and II used the Primary Printer Pencil and wrote on special lined paper used in their respective classrooms. Pupils in Grades III and above wrote with an ordinary lead pencil on foolscap as was done in their respective classrooms.

REPORTING THE FINDINGS

The findings of this study were presented and discussed in three parts: first, the Printed Language in CTBS subtests, Schonell and Gray tests; second, the Spoken Language in Constrained and Unconstrained Responses; and, third, the Written Language in Sentence Writing.

RESULTS AND DISCUSSIONS

Part I: Printed Language in CTBS Subtests

The study had asked if there were significant correlations between reading and the other CTBS subtests for all participants, for all non-native, all native school pupils and for them in each individual grade. The Pearson product-moment correlation approach was used to establish the correlation coefficients. Table 2 shows the correlation coefficients for the total population and the two groups of non-native and native school pupils.

Table 2

Correlation Coefficients for CTBS Subtests for the Total Population and for the Elementary Non-Native and Native School Pupils

CTBS Subtests	Total Sample ($N = 96$) r	Non-Native ($N = 48$) r	Native ($N = 48$) r
Reading with Vocabulary	.95*	.97*	.94*
Reading with Language	.94*	.96*	.92*
Reading with Mathematics	.93*	.94*	.92*

*$p < .01$

Results indicated that between reading and vocabulary, reading and lanaguage and between reading and mathematics there were strong relationships ($p < .01$) for the 96 as well as for the 48 non-native ($p < .01$) and the 48 native school pupils ($p < .01$).

Discussing the results shown in Table 2, overall correlational relationships suggested that, (1) silent reading was a major integral component that was essential to process successfully various contents in the subtests, that (2) some proficiency in recognizing and perceiving as well as sufficient background experiences in giving meaning to English words, phrases and sentences were fundamental in carrying on and through all subtests requirements, and that (3) all non-native and native school pupils in this study did possess in varying degrees these fundamental educational skills.

When correlation coefficients were calculated for each grade in which non-native and native school pupils were reading and learning through reading, all correlations of reading with vocabulary ($p < .01$), reading with language ($p < 01$, $p < .05$), and reading with mathematics ($p < .01$, $p < .05$, $p < .10$) were also significant. Table 3 shows grade-by-grade correlation coefficients.

Nevertheless, what was not observable in the correlations of total population and the non-native and the native groups (Table 2), became observable in correlation coefficients that were calculated on a grade-by-grade basis. Though small in numbers ($N = 12$), the grade-by-grade correlations revealed that non-native and native school pupils alike in Grade V involved reading in subtests Language and Mathematics with lesser intensity. Similar observations were made for the non-

native and native school pupils in Grades II and VI in subtests Mathematics (Table 3).

Table 3

Correlation Coefficients for CTBS subtests for Individual Grades I to VIII for Non-Native and Native School Pupils

Grade (N=12)	Reading with Vocabulary r	Reading with Language r	Reading with Mathematics r
I	.87*	.89*	.76*
II	.88*	.87*	.60**
III	.74*	.73*	.78*
IV	.85*	.82*	.84*
V	.73*	.62**	.56**
VI	.83*	.80*	.50***
VII	.92*	.94*	.79*
VIII	.84*	.76*	.83*

*$p < .01$ **$p < .05$ ***$p < .10$

The individual grade correlational relationships suggested that: (1) there were impending needs to teach reading beyond the basic skill levels of pronouncing words and giving meaning, that is, to teach higher level reading skills pertinent to reading in the subject matter areas, that (2) each area has its own reading approaches and each approach its reading specificities and that (3) these pertinent subject reading skills must be practised so that the higher level reading skills become within the pupils automatic work habit responses which, when called for, can be readily applied.

Next, differences of mean performances on the CTBS subtests between the non-native and the native school pupils in Grades I to VIII were investigated using t-tests.

There were no significant differences between the mean performances of the two groups of non-native and native school pupils as shown in Table 4.

Table 4

A Comparison of Mean Scores of the CTBS Subtests Between Non-Native and Native School Pupils in Grades I to VIII

	Non-Native (N = 48)		Native (N=48)		
Subtests	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Reading	5.34	2.64	4.65	2.07	1.83
Vocabulary	5.38	2.73	4.62	2.13	1.51
Language	5.26	2.56	4.74	2.26	1.05
Mathematics	5.27	2.56	4.77	2.16	1.03

The results of the mean performances in reading, vocabulary, language and mathematics for the 48 non-native school pupils in Grades I to VIII were not distinctly different from those of the 48 native pupils in the same grades. At least in this study the native performers demonstrated that they were able to process the English language through silent reading almost as efficiently and effectively as their non-native peers.

Non-significance was also substantiated when grade-by-grade differences in vocabulary, language and mathematics performances between the non-native and the native groups were calculated. However, in reading performances three significant differences surfaced. Table 5

shows the grade-by-grade mean achievements in Subtest Reading between the two groups of non-native and native school pupils.

Table 5

A Comparison of Grade-by-Grade Mean Scores of the Reading Subtests Between Non-Native and Native School Pupils in Grades I to VIII

	Non-Native (N = 6)		Native (N = 6)		
Grade	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
I	2.07	.99	1.87	.57	.43
II	3.10	1.27	2.63	.79	.76
III	3.47	.86	3.38	.71	.18
IV	5.50	1.30	4.05	.51	2.53*
V	6.45	.67	5.20	.86	2.80*
VI	6.42	1.62	5.75	1.12	.83
VII	7.63	2.12	7.02	1.48	.58
VIII	9.18	1.49	7.30	1.02	2.53*

*$p < .05$

Only when mean performances of the non-native with the native pupils were compared for each grade, significant differences ($p < .05$) in reading achievement were accomplished by the non-native pupils in Grades IV, V, and VIII. The results indicated that the non-native pupils in these three grades read more effectively in the sense that they completed correctly more multiple-choice items on subtest Reading than did the native pupils in the same grades.

Schonell Graded Reading Test

The question that was raised earlier was: What will be the differences, if any, between the two groups of elementary non-native and native school pupils when reading orally the Schonell 100-Graded Words to obtain reading ages for word recognition? To ascertain whether

there were significant differences in pronouncing the scientifically graded words each participant in this study continued to read orally until he/she failed in ten successive words. Results in Table 6 for word recognition shows that in the mechanics of decoding words there were no significant differences. Non-native and native pupils pronounced words in isolation with almost equal accuracy.

Table 6

A Comparison of Graded Word Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII

	Non-Native (N = 48)		Native (N=48)		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Word Recognition	48.56	24.06	42.98	21.47	1.20
Reading Age	9.86	2.40	9.30	2.15	1.20

Mean performances were nonsignificant thus indicating that non-native and native school pupils recognized and pronounced correctly about the same amount of words. Both non-native and native school pupils read efficiently words-in-isolation by applying knowledge in phonetics, structural skills and word discrimination combined with general background information which functioned together as power of reading.

Then, from the number of words correctly recognized and pronounced, the reading age for word recognition was calculated. The data recorded for Reading Age in Table 6 shows that the Reading Age differences were again nonsignificant. The results of the mean Reading Ages substantiated the findings in Word Recognition in that the non-native and native school pupils in this study possessed the power of reading almost equally well and that their ability to apply the power of reading did not differ significantly.

Gray Oral Reading Test

Next, the question was asked if there will be differences in mispronouncing words in context when reading orally an assigned passage from the Gray Oral Reading Test and if there will be differences in answering four literal questions after oral reading. To ascertain whether or not differences were significant, t-tests were used as Table 7 shows.

Table 7

A Comparison of Oral Reading Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII

	Non-Native (N = 48)		Native (N=48)		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Oral Reading Errors	1.87	2.42	2.00	2.74	-0.24
Comprehension Responses	3.04	1.01	2.70	1.22	1.50

Mean results evidenced that the native pupils mispronounced more words than the non-native pupils but that the differences were statistically not significant. Again, these findings supported the substantiated power of reading for both the non-native and the native pupils. They were capable to integrate words-in-context with perceptual skill in verbal relations, intelligence and sufficient flexible eye-movement which together culminated in their ability to read with power. At least in this study native pupils mustered similar power in oral reading comprehension as did the non-native pupils. Their mean responses indicated that they answered correctly more literal questions than their native peers; however, differences between the two groups were indistinctive.

Part II: Spoken Language
Constrained Responses

The question was asked if there will be differences between the non-native and the native school pupils in how they used eight designated parts of speech in answering five questions. These questions were designed to elicit Constrained Responses. The English words that were used to form the oral answers were sorted into the known word classifications of: definite and indefinite articles, personal pronouns in first, second and third person singular and plural, proper and common nouns in singular and plural, auxiliary and main verbs in active and passive voices of present, past and future tenses, adjectives, adverbs, prepositions and conjunctions.

When the different parts of speech that were used to answer the predetermined questions were analyzed, t-tests presented in Table 8 showed the following results.

Table 8

Significance of Difference Between Mean Scores for Non-Native and Native School Pupils in Grades I to VIII for Parts of Speech in Constrained Responses

Parts of Speech	Non-Native (N = 48)		Native (N=48)		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Articles	4.29	2.67	2.73	2.78	2.81*
Pronouns	13.83	7.62	8.98	9.65	2.73*
Nouns	24.64	8.19	17.58	8.40	4.17**
Verbs	20.92	7.08	13.92	8.43	4.70**
Adjectives	8.81	3.96	5.39	4.16	4.12**
Adverbs	9.02	6.09	6.83	6.44	1.71
Prepositions	7.02	3.86	4.29	4.60	3.15*
Conjunctions	10.02	5.18	5.93	8.61	2.81*

* $p < .01$ **$p < .001$

In this study non-native pupils achieved significantly higher output performances than did the native school pupils in answering the same five questions. More specifically, the non-native pupils used more words in each designated word classification than did their native peers. Mean differences except those of adverbs were all significant at the .01 and .001 levels indicating that non-native speakers used distinctly greater quantities of words in each of the listed word classifications in Table 8. Were non-native pupils ready to talk more when asked? Did the proper choice of English words come easier to them? Did greater amount of English words mean greater facility in speaking the English language, that is, expressing themselves orally?

In contrast, native pupils failed to demonstrate equal or similar results in using the parts of speech that were tested in Constrained Responses. When their mean responses were compared to those of the non-native pupils, findings indicated that the native speakers used about from one-third to one-half fewer English words to answer the five questions than did their non-native peers. Was it within the nature of the native pupils to talk less when asked? Is it, perhaps, within the nature of native people to talk less in general? Were the significant differences perhaps suspect of cultural differences, of differences in language and thought that supplied stable and permanent meanings of words from which native and non-native pupils formed their concepts and ideas?

Unconstrained Responses

When the question was asked if there will be differences between the non-native and the native pupils in using the same lexical and functional words in speaking about a chosen picture card, less distinguishable findings were reported in Unconstrained Responses. Table 9 shows the results.

Table 9

Significance of Difference Between Mean Scores for Non-Native and Native School Pupils in Grades I to VIII for Parts of Speech in Unconstrained Responses

Parts of Speech	Non-Native (N = 48)		Native (N=48)		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Articles	5.02	4.73	4.75	3.55	0.32
Pronouns	11.25	6.87	8.54	5.09	2.19*
Nouns	12.64	8.11	11.23	6.18	0.96
Verbs	13.37	7.72	11.79	6.16	1.11
Adjectives	6.56	3.20	6.08	4.08	0.64
Adverbs	4.67	5.78	3.10	2.75	1.69
Prepositions	3.94	3.80	3.19	3.08	1.06
Conjunctions	8.06	6.01	5.43	4.79	2.38*

*$p < .05$

When the results were examined, two facts surprised. First, the mean amounts of English words used were reduced, in some instances drastically. Second, most of the word classifications with the exceptions of pronouns and conjunctions were statistically not significant.

The reduction in the amount of words used to react orally to Unconstrained Responses was most obvious within the performances of the non-native pupils. For example, the use of proper and common nouns in singular and plural, dropped to half from a mean of 24.64 in Constrained to a mean of 12.64 in Unconstrained Responses; the use of auxiliary verbs and main verbs in active and passive voice of present, past and future tenses retrograded from a mean of 20.92 in Constrained to a mean of 13.37 in Unconstrained Responses; and, the use of adverbs was halved again from a mean of 9.02 in Constrained to a mean of 4.67 in Unconstrained Responses.

Less drastically, however, were the quantitative reductions of the various word classifications used by the native school pupils in reacting orally to the same Unconstrained Responses. For example, the use of nouns receded only from a mean of 12.64 in Constrained to a mean of 11.23 in Unconstrained Responses; for the use of verbs from a mean of 13.37 in Constrained to a mean of 11.79 in Unconstrained Responses; for adverbs there was a drop from a mean of 4.67 in Constrained to a mean of 3.10 in Unconstrained Responses.

Consequently, the observed retrogressions in almost all tested word classifications produced nonsignificant t-values with the exceptions of pronouns and conjunctions which were significant at the .05 levels. The greater frequency with which pronouns and conjunctions were used by the non-native pupils, indicated that they were able to construct English sentences more suitable to express their ideas. Pronouns were used to substitute nouns and conjunctions to express several ideas by joining them together in a sentence.

The fact that there were observed retrogressions in word usages between the two kinds of responses raised several questions. Were teacher-elicited responses more practised in daily instruction than student-emitted responses? Was the reduction in word usage a reflection of the traditional teaching cliché that in school the teacher asks but the pupil answers? Or, did it reflect a paucity of imagination in the young minds to read beyond the line?

However, to gain a broader, perhaps even deeper understanding of how oral language was used in Constrained and Unconstrained Responses between the 48 non-native and the 48 native school pupils in Grades

I to VIII, two line graphs were included in this study. Figure 1 illustrates graphical representations of how English common nouns in singular and plural and Figure 2 how main verbs in present, past and future tenses were used.

The two graphs used the same grid of perpendicular and horizontal lines for locating the number of words and the school grades respectively. The legend remained also the same for each graph denoting which of the four lines represented what kinds of responses and who the respondents were. By reading carefully the grid and the legend, by following carefully the directions of the four different lines, total and partial performances of the words that were used by the non-native and the native school pupils can be noted and placed in comparative relationships to one another.

For example, the line graph in Figure 1 represents an overall view of Common Noun Responses that were given in Constrained and Unconstrained Responses between the non-native and the native school pupils. In Constrained Responses, the non-native pupils started with a high of 104 noun words, crasted at Grade VII and receded slightly at Grade VIII, while the native pupils began lower to peak at Grade V, plunged to a low at Grade VI and recovered somewhat upward to Grade VIII. In the Unconstrained Responses, the native pupils in Grade I had a headstart over the non-native pupils who soon overtook the native performances at Grade III to peak at Grade IV. However, non-native performances receded downward to Grade VI which let the native pupils peak at Grade V, who went in seesaw movement down to Grade VI, up to Grade VII to taper off at Grade VIII. In the meantime the non-native pupils reached a high at Grade VII to finish with a sharp downward slide at Grade VIII.

Figure 1:

COMPARISON OF CONSTRAINED & UNCONSTRAINED COMMON NOUN RESPONSES OF 48 NATIVE & 48 NON-NATIVE SCHOOL PUPILS IN GRADES ONE TO EIGHT

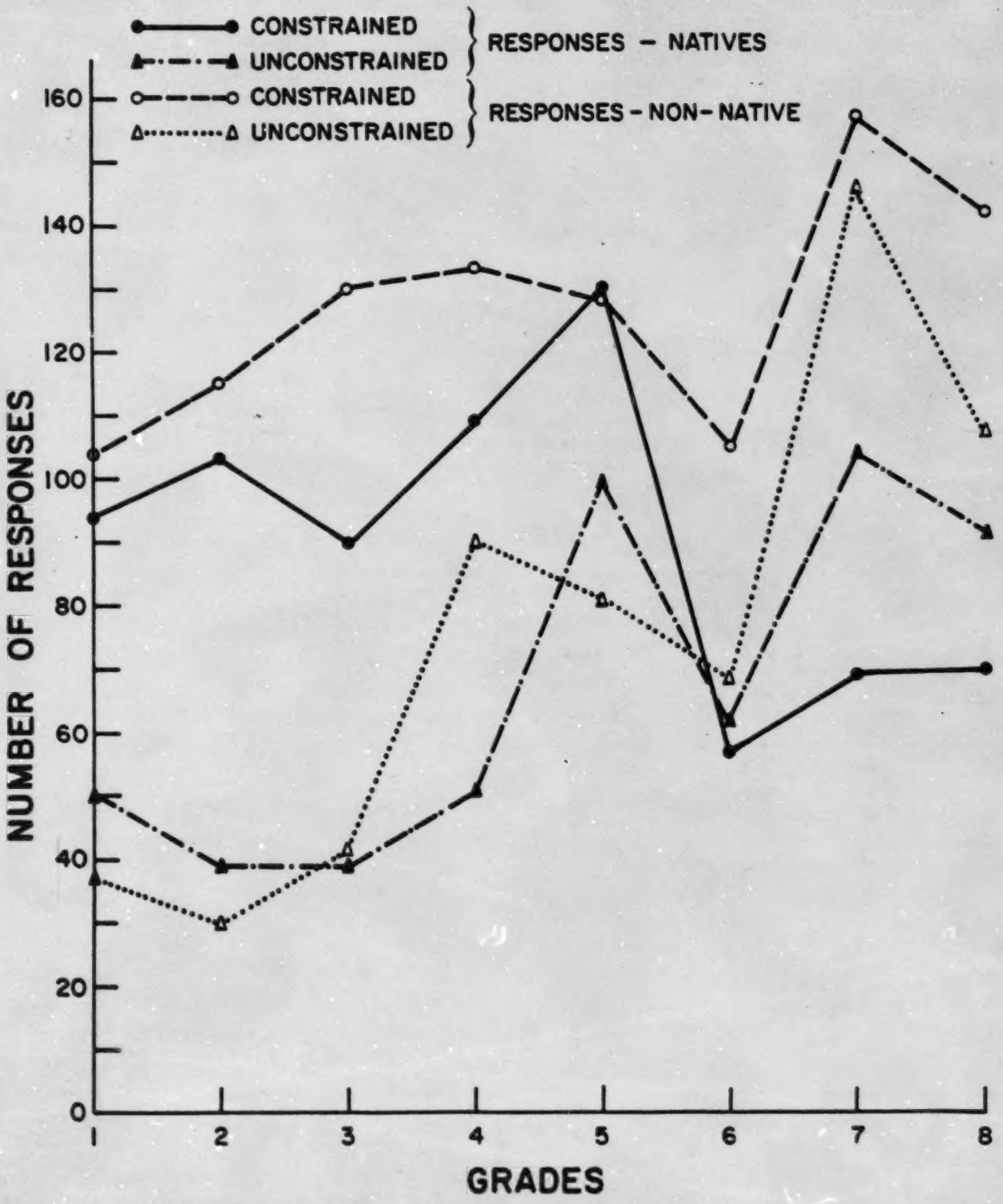
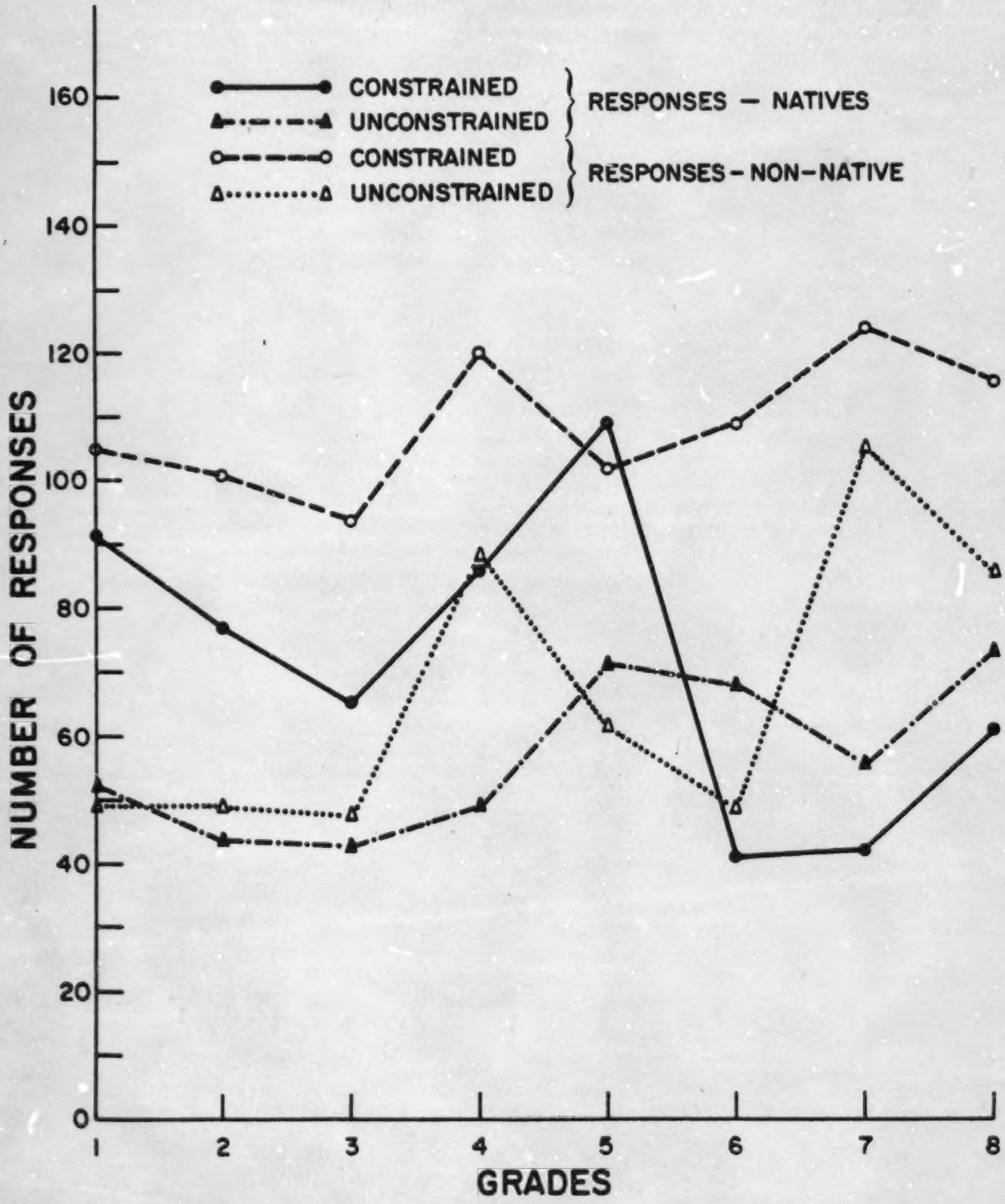


Figure 2:

COMPARISON OF CONSTRAINED & UNCONSTRAINED MAIN VERB RESPONSES OF 48 NATIVE & 48 NON-NATIVE SCHOOL PUPILS IN GRADES ONE TO EIGHT



In a more specific comparison of the same Common Noun Responses in Figure 1, the non-native pupils in Grade VII (N=6) reached a high of 157 common nouns in Constrained and of 146 nouns in Unconstrained Responses which was followed in reverse order by the native pupils in the same grade (N=6) with a high of 104 common nouns in Unconstrained and with a low of 69 common nouns in Constrained Responses. The Common Noun Responses, Constrained and Unconstrained, evidenced that the non-native pupils in Grade VII were using 88 and 42 more common nouns in singular and plural respectively than did the native pupils in Grade VII in performing the same tasks.

Similar comparisons can be made by the readers with Main Verb Responses in Figure 2. For instance, in Constrained Responses, non-native verb usage was cresting all other verbal responses with a native promontory intercepting at Grade V that plummeted in Grade VI, creeping along only to finish with the lowest verb performance at Grade VIII. In Unconstrained Responses, native verb usage was slightly ahead, receded however quickly in Grades II, III, and IV to move up to Grade V and ended with 73 main verb responses at Grade VIII. Non-native verb performances peaked at Grades IV and VII with an equal low at Grades I and VI, but finished well above the native verb usage in Constrained and Unconstrained Responses.

Part III: Written Language
Sentence Writing

The last question asked in this study was if there will be differences between the non-native and the native elementary school pupils in the number of words used in writing sentences and in misspelling

words in the same sentences. Again, t-tests were used to ascertain whether or not significant differences were found. Table 10 presents the results that were obtained in Sentence Writing.

Table 10

Significance of Difference of Mean Scores Between Non-Native and Native School Pupils in Grades I to VIII for Word Usage in Sentence Writing

	Non-Native (N = 48)		Native (N=48)		
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t
Sentence writing	17.06	11.29	14.85	9.44	1.04
Misspelling	1.58	1.82	1.10	1.10	1.56

Mean scores evidenced that neither the number of words used in writing the sentences nor the words misspelled in the same sentences were significantly different between the elementary non-native and native writers.

When Sentence Writing was analyzed before subjecting the raw scores to the t-tests, non-native writers produced 819 words and formed with them 67 complete and nine incomplete sentences. Within these written utterances the non-native writers misspelled 76 words, or 9.28 percent, of the total word script. In comparison, the native writers produced 713 words and used them to form 58 complete and 11 incomplete sentences. Within these written utterances the native writers misspelled 53 words, or 7.43 percent, of the total words used to write sentences.

In forming sentences in the English language, the non-native school pupils demonstrated slightly better ability in stringing letters to words and words to complete sentences than was shown by their native counterparts. However, spelling the words that formed the sentences, native school pupils made fewer errors in misspelling than their non-native peers. Nevertheless, none of the mean differences in Sentence Writing were statistically significant.

WHAT HAS BEEN LEARNED

This exploratory study rested upon painstaking work of sorting and processing about 25,000 pieces of information that had resulted from the administration of the CTBS, the Graded Word Reading Test, the Gray Oral Reading Test, Constrained Responses, Unconstrained Responses, and from Sentence Writing. The data that were obtained were indispensable for measuring achievement in the six performance events that were tested for correlationships as well as for differences in academic school performances between the elementary non-native and the native pupils. Each event had its own requirements under which certain performances were expected to be achieved. In this study non-native and native school pupils worked under equal conditions to attain achievements that were either equal, similar, or alike.

In processing the printed language in silent and oral reading and the written language in sentence writing, neither the non-native nor the native school pupils in Grades I to VIII demonstrated greater significant proficiencies in the English language in these modes of communication.

In processing the spoken language through reacting orally to Constrained Responses, the group of elementary non-native pupils demonstrated greater skills and aptness in using the English language than did the native group. However, when reacting orally to Unconstrained Responses, the group of elementary non-native pupils dropped drastically while the native group receded rather slowly in using the English language.

MORE FACTS NEEDED

This exploratory study did what it set out to do, to substantiate if there were any shortcomings in fundamental educational skills between a group of elementary non-native and a similar group of elementary native school pupils in the same grades and the same school.

This study recommended that the language reading phenomena between non-native and native school pupils that were explored and reported here be studied and tested in other city and rural elementary and high schools in and beyond the Province of Saskatchewan.

This study raised furthermore these questions: Would, for instance, a similar study under similar conditions yield similar results in schools with similar non-native and native populations in Qu'Appelle Valley, in Moose Jaw, or in any other northern school district? Or, would a similar study with only elementary native school pupils produce results similar to this study? Or, would a study that involved elementary school pupils from different native and non-native lineages from different geographical regions in Canada produce findings unlike those reported here?

Answers to these and other pertinent questions can only be obtained through further extensive research. In turn, based on research findings new directions can be chartered for sound financing and implementing educational programs that will more effectively and efficiently serve the worthy cause of instructing Canadian native and non-native school pupils together in Canadian and world citizenry of tomorrow.

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